

CLAIMS:

1. A liquid filter arrangement comprising:
 - (a) a housing;
 - (b) a primary filter element operably positioned within the housing; the primary filter element comprising:
 - (i) a cylindrical extension of pleated fibrous media defining an internal volume;
 - (ii) a primary filter media support tube circumscribed by the cylindrical extension of pleated fibrous media, the primary filter media support tube having a first end and a second end;
 - (c) a secondary filter construction completely circumscribed by the primary filter media support tube, the secondary filter construction operably positioned to filter liquid after the liquid has passed through the primary filter element and before the liquid has left the housing, the secondary filter construction comprising:
 - (i) a porous screen being spaced at least 5 mm from the primary filter media support tube to define an intermediate flow chamber therebetween; and
 - (ii) a porous support structure having a first end secured to a first, open, end piece, and a second end secured to a second, closed, end piece; the second end of the primary filter media support tube extending axially beyond the second, closed, end piece;
 - (d) a bypass valve construction selectively permitting liquid flow to bypass the primary filter element and to pass through the secondary filter construction, whenever the bypass valve construction is open; the bypass valve construction being completely circumscribed by the primary filter media support tube, the bypass valve construction including a bypass end piece having a bypass flow aperture therein;
 - (i) the second end of the primary filter media support tube secured to the bypass end piece to enclose the secondary filter construction within a volume defined by:
 - (A) the bypass end piece;

- (B) the primary filter media support tube; and,
 - (C) the first, open, end piece;
 - (ii) with the bypass valve construction being positioned within the volume.
- 2. A liquid filter arrangement according to claim 1 wherein:
 - (a) the porous screen of the secondary filter construction comprises a wire screen.
- 3. A liquid filter arrangement according to claim 1 wherein:
 - (a) the porous support structure comprises a spiral wound, edge interlocked, metal support tube.
- 4. A liquid filter arrangement according to claim 1 wherein:
 - (a) the porous screen and the porous support structure, of the secondary filter construction, together define a tubular structure having first and second opposite ends:
 - (i) the first end of the tubular structure being secured to a first, open, end piece; and
 - (ii) the second end of the tubular structure being secured to a second, closed, end piece.
- 5. A liquid filter arrangement according to claim 4 wherein:
 - (a) the cylindrical extension of pleated fibrous media has first and second, opposite, ends;
 - (i) the first end being non-releaseably secured to the first, open, end piece; and
 - (ii) the second end being non-releaseably secured to the bypass end piece.
- 6. A liquid filter arrangement according to claim 5 including:
 - (a) a top plate positioned within the housing and permanently retaining the primary filter element, the secondary filter construction and the

bypass valve construction in the housing, to form a disposable filter unit.

7. A liquid filter arrangement according to claim 4 wherein:
 - (a) the cylindrical extension of pleated fibrous media extends between a first, open, primary filter element end piece and a second, open, primary filter element end piece;
 - (i) the first, open, primary filter element end piece being releaseably sealed to the first, open, end piece of the secondary filter construction; and
 - (ii) the second, open, primary filter element end piece being releaseably sealed to the bypass end piece.
8. A liquid filter arrangement according to claim 7 wherein:
 - (a) the primary filter element comprises a removable and replaceable component in the housing.
9. A liquid filter arrangement according to claim 2 wherein:
 - (a) the wire screen comprises a wire size of 0.030 inches in diameter or smaller.
10. A liquid filter arrangement according to claim 2 wherein:
 - (a) the wire screen has a wire density within the ranges of 20 to 50 per inch by 100 to 250 per inch.
11. A liquid filter arrangement according to claim 2 wherein:
 - (a) the wire screen comprises a plain Dutch weave.
12. A method for filtering liquid with a filter arrangement according to any of claims 1-11, the method comprising:
 - (a) directing liquid through the primary filter element; and then
 - (b) directing the liquid through the secondary filter element.

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13. A method for filtering liquid according to claim 12, and further comprising:
- (c) opening a bypass valve to permit the liquid to bypass the primary filter element and to pass through the porous screen.